

added, in the third *Figure* of the IX. *Scheme*, of a piece of it, which you may perceive represents a confus'd heap of the fibrous parts curiously jointed and implicated. The joints are, for the most part, where three *fibres* onely meet, for I have very seldom met with any that had four.

At these joints there is no one of the three that seems to be the stock whereon the other grow, but each of the *fibres* are, for the most part, of an equal bigness, and seem each of them to have an equal share in the joint; the *fibres* are all of them much about the same bigness, not smaller towards the top of the Sponge, and bigger neerer the bottom or root, as is usuall in Plants, the length of each between the joints, is very irregular and different; the distance between some two joints, being ten or twelve times more then between some others.

Nor are the joints regular, and of an *equitriagonal Figure*, but, for the most part, the three *fibres* so meet, that they compose three angles very differing all of them from one another.

The meshes likewise, and holes of this reticulated body, are not less various and irregular: some *bilateral*, others *trilateral*, and *quadrilateral* Figures; nay, I have observ'd some meshes to have 5, 6, 7, 8, or 9. sides, and some to have onely one, so exceeding various is the *Lusus Natura* in this body.

As to the outward appearance of this Vegetative body, they are so usuall every where, that I need not describe them, consisting of a soft and porous substance, representing a Lock, sometimes a fleece of Wooll; but it has besides these small *microscopical* pores which lie between the *fibres*, a multitude of round pores or holes, which, from the top of it, pierce into the body, and sometimes go quite through to the bottom.

I have observ'd many of these Sponges, to have included likewise in the midst of their fibrous contextures, pretty large friable stones, which must either have been inclos'd whil'st this Vegetable was in formation, or generated in those places after it was perfectly shap'd. The later of which seems the more improbable, because I did not find that any of these stony substances were perforated with the *fibres* of the Sponge.

I have never seen nor been enform'd of the true manner of the growing of Sponges on the Rock; whether they are found to increase from little to great, like Vegetables, that is, part after part, or like Animals, all parts equally growing together; or whether they be *matrices* or seed-baggs of any kind of Fishes, or some kind of watry Insect; or whether they are at any times more soft and tender, or of another nature and texture, which things, if I knew, I should much desire to be informed of: but from a cursory view that I at first made with my *Microscope*, and some other trials, I supposed it to be some Animal substance cast out, and fastned upon the Rocks in the form of a froth, or *congeries* of bubbles, like that which I have often observ'd on Rosemary, and other Plants (wherein is included a little Insect) that all the little films which divide these bubbles one from another, did presently, almost after the substance began to grow a little harder, break, and leave onely the thread behind, which might be, as 'twere, the angle or thread between the bubbles, that the great

great holes or pores observable in these Sponges were made by the eruption of the included *Heterogeneous* substance (whether air, or some other body, for many other fluid bodies will do the same thing) which breaking out of the lesser, were collected into very large bubbles, and so might make their way out of the Sponge, and in their passage might leave a round cavity; and if it were large, might carry up with it the adjacent bubbles, which may be perceiv'd at the outside of the Sponge, if it be first thoroughly wetted, and suffer'd to plump it self into its natural form, or be then wrung dry, and suffer'd to expand it self again, which it will freely do whil'st moist: for when it has thus plump'd it self into its natural shape and dimensions, 'tis obvious enough that the mouths of the larger holes have a kind of lip or rising round about them, but the other smaller pores have little or none. It may further be found, that each of these great pores has many other small pores below, that are united unto it, and help to constitute it, almost like so many rivulets or small streams that contribute to the maintenance of a large River. Nor from this *Hypothesis* would it have been difficult to explicate, how those little branches of *Coral*, small *Stones*, *shells*, and the like, come to be included by these frothy bodies: But this indeed was but a conjecture; and upon a more accurate enquiry into the form of it with the *Microscope*, it seems not to be the true origine of them; for whereas Sponges have onely three arms which join together at each knot, if they had been generated from bubbles they must have had four.

But that they are Animal Substances, the *Chymical* examination of them seems to manifest, they affording a volatil Salt and spirit, like *Harts-Horn*, as does also their great strength and toughness, and their smell when burn'd in the Fire or a Candle, which has a kind of fleshy sent, not much unlike to hair. And having since examin'd several Authors concerning them, among others, I find this account given by *Bellonius*, in the XI. Chap. of his 2<sup>d</sup> Book, *De Aquatilibus*. *Spongiæ recentis*, says he, *à siccis longe diversæ, scopulis aquæ marinæ ad duos vel tres cubitos, nonnunquam quatuor tantum digitos immersis, ut fungi arboribus adhærent, sordido quodam succo aut mucosa potius sanie refertæ, usque adeo fetida, ut vel eminus nausæam excitet, continetur autem iis cavernis, quas inanes in siccis & lotis Spongiis cernimus: Putris pulmonis modo nigra conspiciuntur, verum quæ in sublimi aqua nascuntur multo magis opaca nigredine suffusæ sunt. Vivere quidem Spongiæ adhærendo Aristoteles censet: absolute vero minime: sensumque aliquem habere, vel eo argumento (inquit) credantur, quod difficillime abstrahantur, nisi clanculum agatur: Atq; ad avulsoris accessum ita contrahantur, ut eas evellere difficile sit, quod idem etiam faciunt quoties status tempestatisque urgent. Puto autem illis succum sordidum quem supra diximus carnis loco à natura attributum fuisse: atque meatibus latioribus tanquam intestinis aut interaneis uti. Cæterum pars ea quæ Spongiæ cautibus adhærent est tanquam folii petiolus, à quo veluti collum quoddam gracile incipit: quod deinde in latitudinem diffusum capitis globum facit. Recentibus nihil est fistulosum, hæsitantque tanquam radicibus. Superne omnes propemodum meatus concreti latent: inferne verò quaterni aut quini patent, per quos*